

REMARKS

Upon entry of this amendment, claims 1, 4, 5, 16, 19, 20, 22 and 24 are all the claims pending in the application. Claims 2, 3, 17, 18, 21, 23, 25 and 26 have been canceled by this amendment.

I. Claim Rejections under 35 U.S.C. § 112, second paragraph

Claims 1, 2, 4, 5, 15-17, 19-22 and 24 have been rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

In particular, the Examiner has indicated that the feature recited in the claims drawn to the cutoff frequency of the signal generator being made constant renders the claims indefinite. By this amendment, Applicants note that claims 1 and 16 have been amended so as to recite that the cutoff frequency of the signal generator is made constant at a time of a gain setting of the signal generator.

In view of the foregoing, Applicants respectfully submit that the claims satisfy the requirements of 35 U.S.C. 112, second paragraph. Accordingly, Applicants kindly request that the above-noted rejection be reconsidered and withdrawn.

II. Claim Rejections under 35 U.S.C. § 102 and § 103

A. Claims 1, 2, 5, 16, 17 and 20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over Ishii et al. (US 5,280,641).

Claim 1, as amended, recites the features of a signal generator having an output load part

comprising a variable resistor and an output terminal, said variable resistor comprising a plurality of selectable resistors, wherein a resistance value of said variable resistor is controlled by controlling a first switching unit so as to select at least one resistor of said plurality of selectable resistors; and a variable capacitor connected between said output terminal and an AC grounded terminal, said variable capacitor comprising a plurality of selectable capacitors, wherein a capacitance value of said variable capacitor is controlled by controlling a second switching unit so as to select at least one capacitor of said plurality of selectable capacitors. Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious the above-noted features recited in amended claim 1.

Regarding the above-noted features, Applicants note that while Ishii discloses the use of an AGC transistor 16 and a variable capacitor 62, that the AGC transistor 16 of Ishii does not comprise “a plurality of selectable resistors, wherein a resistance value of said variable resistor is controlled by controlling a first switching unit so as to select at least one resistor of said plurality of selectable resistors”, and that the capacitor 62 of Ishii does not comprise “a plurality of selectable capacitors, wherein a capacitance value of said variable capacitor is controlled by controlling a second switching unit so as to select at least one capacitor of said plurality of selectable capacitors”.

In view of the foregoing, Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious at least the above-note features recited in amended claim 1. Accordingly, Applicants submit that claim 1 is patentable over Ishii, an indication of which is kindly requested.

In addition, regarding claim 1, Applicants note that this claim has been amended to recite the feature of a control circuit that controls the capacitance value of said variable capacitor and the resistance value of said variable resistor by controlling on/off action of said first switching unit and said second switching unit so as to make a cutoff frequency of said signal generator constant at a time of a gain setting of the signal generator. Applicants respectfully submit that Iishi does not disclose, suggest or otherwise render obvious such a feature.

In particular, regarding Iishi, Applicants note that this reference discloses an AM radio receiver that is capable of performing automatic tuning. In Iishi, during automatic tuning, an oscillation frequency of a local oscillator 22 is varied in response to the output signal from a PLL circuit 42 (see col. 4, lines 64-66). When a broadcasting station is detected by a station detector 50, the station detector 50 sends the PLL circuit 42 a signal for stopping the frequency variation of the local oscillator signal (see col. 5, lines 31-35). Thereafter, the local oscillation frequency is fixed at the frequency at the moment (see col. 5, lines 34-35).

The PLL circuit 42 then outputs to an RF tuning circuit 20 a tuning signal corresponding to the fixed local oscillator signal, whereby a capacitance of a variable capacitance diode 62 is varied according to the tuning signal so as to set the tuning frequency in the RF tuning circuit 20 (see Fig. 4A and col. 5, lines 35-40). Specifically, in Iishi, it is disclosed that the capacitance of the variable capacitance diode 62 is controlled such that “the tuning frequency in the RF tuning circuit 20 is made 450 KHz smaller than the frequency of the local oscillator 22” (see col. 5, lines 41-43).

Thus, in Iishi, while a capacitance of the variable capacitance diode 62 is controlled such that the tuning frequency in the RF tuning circuit 20 is made 450 KHz smaller than the frequency of the local oscillator 22, Applicants respectfully submit that Ishii does not disclose or suggest the above-noted feature recited in amended claim 1 of a control circuit that “controls the capacitance value of said variable capacitor and the resistance value of said variable resistor by controlling on/off action of said first switching unit and said second switching unit so as to make a cutoff frequency of said signal generator constant at a time of a gain setting of the signal generator.”

In view of the foregoing, Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious the above-noted feature recited in amended claim 1. Accordingly, Applicants submit that claim 1 is patentable over Ishii, an indication of which is kindly requested.

Regarding claim 5, Applicants note that this claim depends from claim 1 and is therefore considered patentable at least by virtue of its dependency.

Regarding claim 16, Applicants note that this claim has been amended in a similar manner as claim 1 so as to recite the features of a signal generator having an output load part comprising a variable resistor and an output terminal, said variable resistor comprising a plurality of selectable resistors, wherein a resistance value of said variable resistor is controlled by controlling a first switching unit so as to select at least one resistor of said plurality of selectable resistors; a variable capacitor connected between said output terminal and an AC grounded terminal, said variable capacitor comprising a plurality of selectable capacitors, wherein a

capacitance value of said variable capacitor is controlled by controlling a second switching unit so as to select at least one capacitor of said plurality of selectable capacitors; and a control means for controlling the capacitance value of said variable capacitor and the resistance value of said variable resistor by controlling said first switching unit and said second switching unit so as to make a cutoff frequency of said signal generator constant at a time of a gain setting of the signal generator.

For at least similar reasons as discussed above with respect to claim 1, Applicants respectfully submit that Iishi does not disclose, suggest or otherwise render obvious such features. Accordingly, Applicants submit that claim 16 is patentable over Iishi, an indication of which is kindly requested. Claim 20 depends from claim 16 and is therefore considered patentable at least by virtue of its dependency.

Regarding claims 2 and 17, as noted above, these claims have been canceled by this amendment.

B. Claims 4, 15, 19, 21, 22 and 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. (US 5,280,641).

Claims 4, 22 and 24 depend from claim 1, and claim 19 depends from claim 16. As noted above, Applicants respectfully submit that Ishii does not disclose, suggest or otherwise render obvious all of the features recited in claims 1 and 16. Accordingly, Applicants submit that claims 4, 19, 22 and 24 are patentable at least by virtue of their dependency.

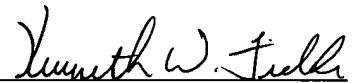
Regarding claims 15 and 21, as noted above, these claims have been canceled by this amendment.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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